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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,803	07/30/2003	Hiroshi Ikeda	50023-208	8245
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McDERMOTT, WILL & EMERY 600 13th Street, N.W. Washington, DC 20005-3096				
			EXAMINER TRIEU, VAN THANH	
			ART UNIT 2636	PAPER NUMBER

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/629,803

Applicant(s)

IKEDA ET AL.

Examiner

Van T Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/30/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-7, 9-14, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by **Durkee** [US 3,689,886].

Regarding claim 1, the claimed electric device possible to perform the power line communication at least in a signal mode for an in-house external power line (the signals of electronic/electrical devices D1-D90 are communicated over the house power lines L10-L12, see Fig. 1, col. 2, lines 26-34 and col. 6, lines 23-29); and the apparatus, which is removable from the external power line and provided with a signal elector between side of receiving power from the external power line and a side of supplying the power, the signal selector passing a power line carrier signal in the mode, and interrupting another power line carrier signal which is in a signal mode different from the mode for the external power line (the electrical outlet G1 may be controlled as one of the functional device D, and connected to the power line 10-12, by a receiver R, which permits to control of any device to be plugged into the outlet. The transmitter units T can be assembled together to form a master control panel or branch, which can be plugged into electrical outlets G, and permits control of selected function devices D by

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selected different frequencies with different time slots, see Figs. 1 and 2, col. 3, lines 62, col. 4, lines 10-28, col. 7, lines 1-24, col. 22, lines 5-26 and 59-66).

Regarding claim 2, all the claimed subject matters are cited in respect to claim 1 above, and including the power branch apparatus (the master control panel or the activate switches can be added to an existing system to provide additional means for controlling certain functional devices D, see col. 3, lines 50-56 and col. 4, lines 26-41).

Regarding claim 3, all the claimed subject matters are cited in respect to claim 2 above, and including the different in frequencies, see Fig. 2, col. 7, lines 1-45 and col. 9, lines 56-63.

Regarding claim 4, all the claimed subject matters are cited in respect to claim 2 above, and including the route controller (the master control panel, see col. 4, lines 26-41).

Regarding claim 5, all the claimed subject matters are cited in respect to claim 2 above, and including the signal converter, which converts a mode of a power line carrier signal to the mode for the external power line, which reads upon the activate switch to generate signal for modifying power signals and detecting the modified power signals to enable a drive circuit to connect the functional devices D to the external power line L10-L12, which then receives energizing power from the external power line, see Fig. 1, col. 22, lines 6-13 and 39-50.

Regarding claim 6, all the claimed subject matters are cited in respect to claim 5 above, and including the signal converter converts a frequency of a power line carrier signal in a different mode from the mode for the external power line to a frequency of the power line signal in the mode for the external line (the selected master control panel converts of different frequencies onto the external power line L10-L12 to be received by that frequency of the external power line, see Figs. 1 and 2, col. 4, lines 10-37 and col. 7, lines 1-25).

Regarding claim 7, all the claimed subject matters are cited in respect to claim 5 above, and including the signal converter converts a power level of a power line carrier signal in a different mode from the mode for the external power line to a power level of the power line signal in the mode for the external power line (the master control panel controls a functional device D by generating or converting tone bursts for modifying power signals and detecting the modified power signals to enable a drive circuit to connect the functional device D to the external power line L10-L12, which then receives energizing power from the external power line, see Fig. 1, col. 22, lines 7-13).

Regarding claim 9, all the claimed subject matters are cited in respect to claim 1 above, and including the filter between the inside and outside of a house (the filter circuit 143, see Fig. 6, col. 9, lines 56-67, col. 10, lines 1-67 and col. 11, lines 1-62).

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Regarding claim 10, all the claimed subject matters are cited in respect to claim 1 above, and including the electronic device has a power code with a shield, which reads upon the RF trap 18 for preventing of code signal to the power line, see Fig. 1, col. 6, lines 63-67.

Regarding claim 11, all the claimed subject matters are cited in respect to claims 1 and 5 above.

Regarding claim 12, all the claimed subject matters are cited in respect to claims 3 and 11 above.

Regarding claim 13, all the claimed subject matters are cited in respect to claims 4 and 11 above.

Regarding claim 14, all the claimed subject matters are cited in respect to claim 11 above, and performs the conversion whether to be connected to the same power branch apparatus as the electrical device of destination of the signal (the master control panel converts signals to the receivers R or destination in the same panel and power line or different locations, see col. 4, lines 26-37).

Regarding claim 18, all the claimed subject matters are cited in respect to claim 1 above.

Regarding claim 19, all the claimed subject matters are cited in respect to claims 5-7 and 18 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Durkee** [US 3,689,886].

Regarding claim 8, **Durkee** fails to disclose the mode for the external power line is compliant with ECHONET standard. However, Durkee discloses a house power lines L10-L12 for connecting to any appliances and electronic devices via household outlets,

see Fig. 1. Therefore, it would have been obvious to one skill in the art to recognize that the house power line of **Durkee** is functionally and compatible with the Japanese ECHONET standard because the ECHONET Japanese standard of the network using in-house power lines, has been a focus of constant attention. ECHONST is the acronym for energy conservation and Homecare. Network content: of which are explained here under according to the written standard of ECHONET, Ver.1.01, published by ECHONET.

3. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Durkee** [US 3,689,886] in view of **Motoori** [US 5,038,364]

Regarding claim 15, **Durkee** fails to disclose the transmitting a signal after a test signal to an electric device of destination of the signal. However, **Durkee** silence of the test signal between the transmitting units T and receiving R at the destination devices D communication signals over the power line L10-L12, see Figs. 1 and 2. **Motoori** suggests that monitoring system sends signal throughout transmission line to the repeater after the loop back tests are carried out, see col. 1, lines 61-66 and col. 5, lines 9-23. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the test signal of **Motoori** for testing the receiver functional device before transmitting the communication signals of **Durkee** in order to prevent of failure transmission, minimizing errors and missing signal over the power line.

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Regarding claim 16, all the claimed subject matters are discussed between **Durkee** and **Motoori** in respect to claim 15 above, and performing the conversion according to an error rate of the test signal, see **Motoori**, col. 2, lines 25-66.

Regarding claim 17, all the claimed subject matters are discussed between **Durkee** and **Motoori** in respect to claim 15 above, and performing the conversion according to an attenuation rate of the test signal, see **Durkee**, col. 13, lines 66-67 and col. 14, lines 1-10.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brown discloses a communications apparatus for use with a mains electricity transmission and/or distribution network, including a signal transmission and/or reception means, and frequency conversion means. [US 6,144,292]

Kushiro et al discloses a luminaire load control system for handling control signals by converting them into power line carrier communication signals, which are transmitted through branch power lines to terminal control units without causing any significant interference to power line installation. [US 5,495,406]

Tiedeken discloses a controller and the AC power line modem send gaming machine data to a remote host polling computer via AC power line in response to a polling request. [US 6,383,076]

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5. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.

A handwritten signature in black ink, appearing to read 'Van Trieu', with a long, sweeping horizontal stroke extending to the right.

Van Trieu
Primary Examiner
Date: 11/18/04